

What is claimed is:

1. An input monitoring system provided in an optical amplifying repeater for monitoring a level of an optical input
5 signal, the input monitoring system comprising:

an input terminal supplied with the optical input signal;

an optical fiber amplifier for amplifying the optical input signal;

10 a first photo diode for detecting and outputting an electric signal corresponding a level of the optical input signal; and

an optical switch operatively connected to the input terminal, the optical fiber amplifier and first photo diode
15 for switching the optical input signal alternatively into the optical fiber amplifier and the first photo diode.

2. The input monitoring system according to claim 1, wherein the optical fiber amplifier is formed of an Erbium doped fiber, and there are further comprised of a first coupler
20 operatively connected to an output side of the optical fiber amplifier, a laser diode for emitting and supplying an optical exciting light to the optical fiber amplifier via the first coupler.

3. The input monitoring system according to claim 2, further comprising:
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a second photo diode operatively coupled to the first coupler for detecting a part of the optical exciting light

emitted from the laser diode.

4. The input monitoring system according to claim 2, further comprising:

5 a second photo diode operatively coupled to the first coupler for detecting the optical exciting light emitted from the laser diode in a backward direction.

5. The input monitoring system according to claim 3, wherein the first photo diode is an avalanche photo diode having an amplifying rate of more than "1".

10 6. The input monitoring system according to claim 4, wherein the first photo diode is an avalanche photo diode having an amplifying rate of more than "1".

7. An input monitoring system provided in an optical amplifying repeater for monitoring a level of an optical input signal, the input monitoring system comprising:

15 an input terminal supplied with the optical input signal;

an optical fiber amplifier for amplifying the optical input signal;

20 a first photo diode for detecting and outputting an electric signal corresponding a level of the optical input signal;

25 a second coupler connected to the input terminal, at which the optical input signal branching to the optical fiber amplifier and the first photo diode;

a first coupler operatively connected to an output side of the optical fiber amplifier; and

a laser diode for emitting and supplying an optical exciting light to the optical fiber amplifier via the first coupler.

8. The input monitoring system according to claim 7, wherein the optical fiber amplifier is formed of an Erbium doped fiber.

9. The input monitoring system according to claim 8, further comprising:

10 a second photo diode operatively coupled to the first coupler for detecting a part of the optical exciting light emitted from the laser diode.

10. The input monitoring system according to claim 8, further comprising:

15 a second photo diode operatively coupled to the first coupler for detecting the optical exciting light emitted from the laser diode in a backward direction.

11. The input monitoring system according to claim 9, wherein the first photo diode is an avalanche photo diode having an amplifying rate of more than "1".

20 12. The input monitoring system according to claim 10, wherein the first photo diode is an avalanche photo diode having an amplifying rate of more than "1".

25 13. An input monitoring system provided in an optical amplifying repeater for monitoring a level of an optical input signal, the input monitoring system comprising:

an input terminal supplied with the optical input signal;

an optical fiber amplifier for amplifying the optical input signal;

a laser diode for emitting and supplying an optical exciting light to the optical fiber amplifier;

5 a photo diode for detecting and outputting an electric signal corresponding to a level of the optical input signal;

branching means for receiving the optical input signal, and outputting branching signals for the optical fiber amplifier and the photo diode; and

10 an optical filter connected between the photo diode and the branching means for removing a component of the exciting light emitted by the laser diode from the output of the branching means to supply only the component of the optical input signal to the photo diode.

15 14. The input monitoring system according to claim 13, wherein the optical fiber amplifier is formed of an Erbium doped fiber.

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